The claims are:

1. A stent, comprising:

an expandable body suitable for dilating a blood vessel; and

an amphiphilic copolymer coating a surface of the body;

wherein the amphiphilic copolymer comprises a continuous network including both hydrophobic and hydrophilic polymer chains that is able to swell in both hydrophobic and hydrophilic solvents.

2. The stent of claim 1, wherein the copolymer is an amphiphilic block copolymer.

3. The stent of claim 1, wherein the amphiphilic block copolymer coating carries a drug of a type and in an effective amount to significantly inhibit one or more of stenosis, restenosis, and vascular narrowing.

4. The stent of claim 2, wherein the amphiphilic block copolymer coating carries a drug of a type and in an effective amount to significantly inhibit one or more of stenosis, restenosis, and vascular narrowing.

5. The stent of claim 4, wherein the amphiphilic block copolymer comprises poly(alkylene glycol) chains and poly(olefin) chains.

6. The stent of claim 4, wherein the block copolymer further comprises polysiloxane chains.

7. The stent of claim 7, wherein the drug is selected from the group consisting of triazolopyrimidine, paclitaxol, sirolimus, derivatives thereof, and analogs thereof.

8. The stent of claim 7, wherein the drug is triazolopyrimidine, a derivative thereof, or an analog thereof.

9. The stent of claim 4, wherein the drug is selected from the group consisting of stem cells, antibodies, genetic materials, and lymphokines.

10. The stent of claim 9, wherein the drug is stem cells.

11. The stent of claim 9, wherein the drug is GM-CSF.

12. The stent of claim 4, wherein the copolymer can be designed to carry any of the drugs triazolopyrimidine, paclitaxol, and sirolimus and release from about 10 to about 90 percent of the drug within the first thirty days of installation in an artery of a living human being by varying lengths of the hydrophobic and hydrophilic polymer chains, ratios between chains, and/or extent of cross-linking.

13. The stent of claim 4, wherein the copolymer can be designed to carry any of the drugs stem cells, antibodies, genetic materials, and lymphokines and release from about 10 to about 90 percent of the drug within the first thirty days of installation in an artery of a living human being by varying lengths of the hydrophobic and hydrophilic polymer chains, ratios between chains, and/or extent of cross-linking.

14. The stent of claim 4, wherein the stent is coated with a plurality of layers, wherein one of the layers acts as a barrier to diffusion of the drug.

15. The stent of claim 14, wherein the barrier layer comprises parylene or a derivative thereof.

16. The stent of claim 4, wherein the stent once installed in an artery of a living human being releases from about 10 to about 90 percent of the drug within the first thirty days of installation.

17. The stent of claim 4, wherein the stent once installed in an artery of a living human being releases from about 10 to about 90 percent of the drug within the first six hours of installation.

18. The stent of claim 1, wherein the surface comprises polymer chains bound at one end to form a carpet-like structure and the amphiphilic polymer at least partially fills interstices within the carpet-like structure.

19. The stent of claim 4, wherein the surface comprises polymer chains bound at one end to form a carpet-like structure and the amphiphilic polymer at least partially fills interstices within the carpet-like structure.

20. The stent of claim 4, wherein the polymer coating remains stable under expansion of the body.

21. The stent of claim 1, wherein the polymer is bioerodable.

22. The stent of claim 4, wherein the polymer is bioerodable.

23. The stent of claim 1, wherein the polymer is biostable.

24. The stent of claim 4, wherein the polymer is biostable.

25. A stent, comprising:

an expandable body suitable for dilating a blood vessel, the body having a surface to which polymer chains are bound at one end to form a carpet-like structure;

collagen coating the polymer-chain covered surface and at least partially filling interstices within carpet-like structure; and

within the collagen, a drug selected from the group consisting of triazolopyrimidine, a derivative thereof, or an analog thereof, stem cells, antibodies, genetic materials, and lymphokines in an amount effective to significantly inhibit one or more of stenosis, restenosis, and vascular narrowing.

26. The stent of claim 25, wherein the drug is triazolopyrimidine a derivative thereof, or an analog thereof.

27. The stent of claim 25, wherein the drug is selected from the group consisting of stem cells, antibodies, genetic materials, and lymphokines.

28. The stent of claim 27, wherein the drug is stem cells.

29. The stent of claim 27, wherein the drug is GM-CSF.

30. A method of manufacturing a stent, comprising:

providing an expandable body suitable for dilating a blood vessel; and

forming over a surface of the body a coating comprising an amphiphilic block copolymer, wherein the amphiphilic block copolymer comprises a network of both hydrophobic and hydrophilic polymer chains that is able to swell in both hydrophobic and hydrophilic solvents.

31. The method of claim 30, further comprising:

forming a solution comprising a solvent and a drug that inhibits one or more of stenosis, restenosis, and vascular narrowing; and

swelling the polymer with the solution.

32. The method of claim 31, further comprising:

evaporating to remove at least some of the solvent from the polymer; and

swelling the polymer a second time with the same or another solution containing the drug.

33. The method of claim 30, wherein, forming a coating comprising an amphiphilic block copolymer comprises coating the surface with a solution of macro-monomers together with a drug and polymerizing the macro-monomers.

34. The method of claim 30, wherein the copolymer can be designed to carry any of the drugs triazolopyrimidine, paclitaxol, and sirolimus and release from about 10 to about 90 percent of the drug within the first thirty days of installation in an artery of a living human being by varying lengths of the hydrophobic and hydrophilic polymer chains, ratios between chains, and/or extent of crosslinking.

35. The method of claim 30 wherein the copolymer can be designed to carry any of the drugs stem cells, antibodies, genetic materials, and lymphokines and release from about 10 to about 90 percent of the drug within the first thirty days of installation in an artery of a living human being by varying lengths of the hydrophobic and hydrophilic polymer chains, ratios between chains, and/or extent of crosslinking.

36. The method of claim 30, further comprising forming the stent by a process comprising microelectomechanical machining.

37. The method of claim 36, wherein the microelectromechanical machining is used to form teeth or other indentations that are part of a ratcheting mechanism.

38. The method of claim 30, wherein the body comprises a web-like structure and the polymer forms webbing within openings in the structure, the method further comprising applying a concentrated stream or spray of solvent to remove the webbing.

39. A method of treating an occluded blood vessel in a living human being, comprising,

inserting an expandable stent according to claim 1 within the vessel; and

expanding the stent.

40. The method of claim 38, wherein the amphiphilic block copolymer carries a drug of a type and in an effective amount to significantly inhibit one or more of stenosis, restenosis, and vascular narrowing.

41. The method of claim 40, wherein the drug is selected from the group consisting of triazolopyrimidine, paclitaxol, sirolimus, lymphokines, derivatives thereof, and analogs thereof.

42. The method of claim 40, wherein the drug is selected from the group consisting of stem cells, antibodies, genetic materials, and lymphokines.

43. The method of claim 42, wherein the drug is stem cells.

44. The method of claim 42, wherein the drug is GM-CSF.

45. The method of claim 40, further comprising administering the drug to the patient either orally or intravenously.

46. A method of treating an occluded blood vessel in a living human being, comprising,

inserting an expandable stent within the vessel; and

expanding the stent with a two layer balloon, the inner layer being relatively impermeable and the outer layer being relatively permeable; and

injecting microparticles containing a drug between the two layers, whereby the microparticles are distributed through the outer layer of the balloon.

47. The method of claim 46, wherein the microparticles comprises an amphiphilic block copolymer, the amphiphilic block copolymer comprising a network including both hydrophobic and hydrophilic polymer chains that is able to swell in both hydrophobic and hydrophilic solvents.

48. The method of claim 47, wherein the amphiphilic block copolymer coating carries a drug of a type and in an effective amount to significantly inhibit one or more of stenosis, restenosis, and vascular narrowing.

49. The stent of claim 48, wherein the drug is selected from the group consisting of triazolopyrimidine, paclitaxol, sirolimus, derivatives thereof, and analogs thereof.

50. The stent of claim 48, wherein the drug is selected from the group consisting of stem cells, antibodies, genetic materials, and lymphokines.

51. The stent of claim 50, wherein the drug is stem cells.

52. The stent of claim 50, wherein the drug is GM-CSF.